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U.S. AGRICULTURAL RESEARCH SERVICE.  
2A ENTOMOLOGY RESEARCH BRANCH//  
PLANT INDUSTRY STATION  
50 BELTSVILLE, MARYLAND

3 THE BLACK WIDOW SPIDER,  
Latrodectus mactans (Fab.) //

The black widow spider is found in all parts of the United States. It is more abundant in the Southern States than in the North.

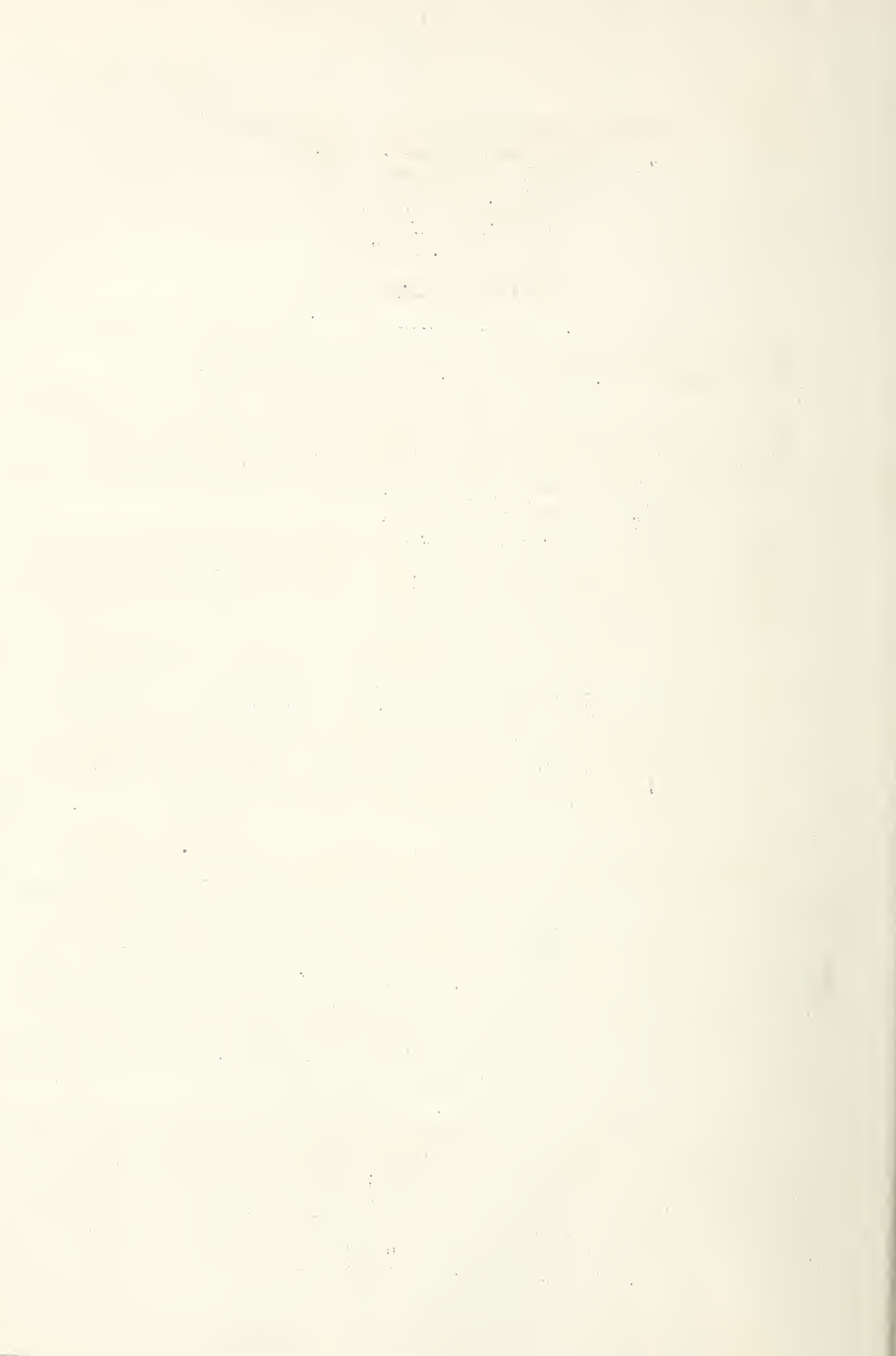
This spider seldom enters houses but is frequently found on the underside of lawn benches, garages, sheds, outdoor toilets, manholes, culverts, and similar places. It is also found under rocks, in hollow logs, and in abandoned burrows of animals. It feeds normally on insects and other small creatures that become ensnared in the web.

The web of the black widow spider is loosely woven, irregular, and is usually at or near the ground level. Three to four hundred eggs are laid at a time and placed inside a dense, whitish silken sac about the size of a large pea which is attached to the web.

The female black widow spider is shining jet black on the upper surface of the body. Usually there is a characteristic red mark shaped like an hourglass on the underside; sometimes it is variable in shape or it may be absent altogether. There may also be one or more red spots above the spinnerets near the tip of the body. The body of a full-grown female is about half an inch in length, exclusive of the rather long legs. Males are smaller. The young spiders and the adult males have yellowish markings on the upper side of the body.

The black widow spider is the most poisonous spider in the United States. The bite is usually painful and may cause serious systemic disturbances. There are authentic records of a few deaths resulting from the bite of this spider. It is not aggressive and it is often difficult to get it to bite for experimental purposes. This is especially true if the spider has been fed recently. It will be attracted by, and may bite moving objects, apparently in quest of food. The bite is inflicted by two stout jaws which work sidewise. The tip of each jaw is provided with an incurved, needlelike tooth through which the poison is injected. The poison glands are in the head near the base of the jaws. The spider often has difficulty in piercing tough skin.

The bite usually causes a stinging sensation at the point of puncture which is marked by a tiny red spot, sometimes surrounded by a whitish wheal. Within a few minutes to an hour or more, a sharp pain develops in the region of the bite and there may be some swelling. If the bite is on the finger, the aching pain progresses up the arm to the shoulder and finally reaches the chest. It may even extend to the hips, and the abdomen may



become rigid. Wherever the bite is, the resulting pain progresses until it reaches the chest or abdomen. Breathing may become forced and irregular, and there may also be muscular contractions. The venom has a retarding effect on the heart, sometimes markedly slowing its action.

Those who are exposed to these spiders in their work should wear leather gloves. In case of a bite by the black widow spider, place an ice pack on the affected area and call a physician.

#### Control Measures

1. Remove loose brick, tile, wood, boards, or trash around the yard where spiders may live or hide.
2. Use wettable powder or emulsion sprays containing 1 percent of chlordane or 1/2 percent of lindane around areas outside the house where black widow spiders are troublesome or abundant. These sprays will not injure vegetation. Apply them to the point of run-off, treating thoroughly the places where spiders hide or live.
3. Oil-base sprays containing 2 percent of chlordane or 1/2 percent of lindane are available ready to use, and can be applied to the point of run-off in critical areas in basements, or in locations outside the house where the oil spray will not get on vegetation which would be injured by the oil. The wettable powder, emulsion, or oil-base sprays kill spiders by contact at the time of application and if thoroughly applied leave a residue which continues to kill spiders for several weeks.
4. Creosote oil can be sprayed in some places but it destroys vegetation, damages paint, and has a strong odor. It is irritating to the skin and must be handled with care. The creosote kills spiders hit with the spray and has a temporary repellent effect on others.
5. In many cases the spiders may be cleared out of an area simply by searching for them, knocking the webs, spiders, and egg sacs down with a stick or broom and crushing them.
6. Pyrethrum-piperonyl butoxide combination will kill spiders hit but has little residual value. This spray should be used where chlordane or lindane cannot be used.
7. A 5 percent DDT-in-oil solution is often recommended but this spray is less effective than chlordane or lindane.

#### PRECAUTIONS:

Chlordane and lindane are poisonous materials but they can be handled with safety. If accidentally spilt on skin wash with soap and water. Avoid inhaling the mists. Do not permit the sprays to contaminate food and cooking utensils.









